

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A multilayer structure formed on a glass or plastic substrate for shading ultraviolet and infrared light, comprising:

~~two or three~~ layers of Ag;

~~two or three~~ layers of indium tin oxide (ITO); and

dielectric oxide layers ranging from two layers to four layers,

wherein ~~at least two~~ AG layers are alternately formed to be in contact with the two ITO layer layers, and the other Ag layer is formed to be in contact with the substrate; as an upward or downward layer;

wherein one of the dielectric layers is a top layer from the substrate; and

wherein each dielectric oxide layer is made of a material which is selected from SiO₂,

Al₂O₃, ZrO₂, Y₂O₃, and Ta₂O₅.

2-3. Cancelled

4. (Currently Amended) The multilayer structure as recited in claim 1, wherein the multilayer structure has seven (7) layers of:

a first layer of Ag formed on the substrate, having a thickness of ~~5.79~~ at least 5.7 nm and a refractive index of ~~0.051~~ at least 0.05;

a second layer of Y₂O₃ formed on the first layer, having a thickness of ~~85.56~~ at least 85.5 nm and a refractive index of ~~1.79581~~ at least 1.7;

a third layer of Ag formed on the second layer, having a thickness of ~~9.39~~ at least 9.3 nm and a refractive index of ~~0.051~~ at least 0.05;

10 a fourth layer of ITO formed on the third layer, having a thickness of ~~71.91~~ at least 71.9 nm and a refractive index of ~~2.058~~ at least 2.05;

a fifth layer of Ag formed on the fourth layer, having a thickness of ~~12.82~~ at least 12.8 nm and a refractive index of ~~0.051~~ at least 0.05;

a sixth layer of ITO formed on the fifth layer, having a thickness of ~~36.14~~ at least 36.1 nm and a refractive index of ~~2.058~~ at least 2.05; and

15 a seventh layer of Y_2O_3 formed on the sixth layer, having a thickness of ~~4.08~~ at least 4.0 nm and a refractive index of ~~1.79581~~ at least 1.7.

5. (Currently Amended) The multilayer structure as recited in claim 1, wherein the multilayer structure has seven (7) layers of:

a first layer of Ag formed on the substrate, having a thickness of at least 5.6 nm and a refractive index of ~~0.0051~~ at least 0.005;

5 a second layer of ZrO_2 formed on the first layer, having a thickness of ~~63.84~~ at least 63.8 nm and a refractive index of ~~2.06576~~ at least 2.06;

a third layer of Ag formed on the second layer, having a thickness of ~~10.05~~ at least 10.0 nm and a refractive index of ~~0.051~~ at least 0.05;

10 a fourth layer of ITO formed on the third layer, having a thickness of ~~76.34~~ at least 76.3 nm and a refractive index of ~~2.058~~ at least 2.05;

a fifth layer of Ag formed on the fourth layer; having a thickness of ~~13.07~~ at least 13.0 nm and a refractive index of ~~0.051~~ at least 0.05;

a sixth layer of ITO formed on the fifth layer, having a thickness of ~~29.57~~ at least 29.5 nm and a refractive index of ~~2.058~~ at least 2.05; and

15 a seventh layer of ZrO_2 formed on the sixth layer, having a thickness of ~~9.58~~ at least 9.5 nm and a refractive index of ~~2.06576~~ at least 2.06.

6-8. Cancelled.

9. (Original) An article comprising the structure of claim 1 applied to a surface of a glass or plastic substrate.

10. (Currently Amended) A window construction for ultraviolet and infrared shading comprising:

a substrate of glass or plastic material;

~~two or~~ three layers of Ag;

5 ~~two or three~~ layers of indium tin oxide (ITO); and

dielectric oxide layers ranging from two layers to four layers,

wherein at least two Ag layers are alternately formed to be in contact with the two ITO layer layers, and the other Ag layer is formed to be in contact with the substrate; as an upward or downward layer

10 wherein one of the dielectric layers is a top layer from the substrate; and

wherein each dielectric oxide layer is made of a material which is selected from SiO₂,

Al₂O₃, ZrO₂, Y₂O₃, and Ta₂O₅.

11. Cancelled.

12. (Currently Amended) A safety glass comprising:

two transparent panes made of glass or plastic material;

a plastic sheet adhered between the two transparent panes, preventing the panes from shattering; and

5 an optical coating formed on at least one of the transparent panes against the plastic sheet, for shading ultraviolet and infrared light, comprising:

~~two or~~ three layers of Ag;

~~two or three~~ layers of indium tin oxide (ITO); and

dielectric oxide layers ranging from two layers to four layers[.];

10 wherein at least two Ag layers are alternately formed to be in contact with the two ITO layer layers, and the other Ag layer is formed to be in contact with the substrate, as an upward or downward layer.

wherein one of the dielectric layers is a top layer from the pane; and

wherein each dielectric oxide layer is made of a material which is selected from SiO₂,

15 Al₂O₃, ZrO₂, Y₂O₃, and Ta₂O₅.

13. Cancelled.